INNOVATIONS IN UNIVERSITY PHYSICS TEACHING: THERE'S NO SILVER BULLET

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ABSTRACT

At a time when University lecturers are facing unprecedented pressure from stakeholders to embrace innovative teaching and technologies, it is important to refer to and conduct educational research to ensure these innovations have the best chance at success.

This poster presents findings from the second of two iterations of a trial involving one type of innovation- an Active Learning technique known as the Interactive Lecture Demonstration - that was implemented in the same thermodynamics module of a large first year physics cohort but by two different lecturers. A comprehensive assessment of the trial and a comparison between the two implementations took place, and included comparisons of learning outcomes as measured by a Thermal Concepts Survey (TCS) and student engagement as measured by a newly developed tool known as the Lecture Activity and Student Engagement (LASE) tool.

Results showed that each lecturer delivered the program in measurably different ways and that this had an effect on student learning outcomes, student attitudes towards the course, and their views on their own achievement.

That the outcome of the two implementations varied in this way has consequences for almost all educational levels and highlights the role of academic educational research in lecturer support and development.

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